

CLAIMS

1. A probe device for measuring characteristics of an electromagnetic field radiated by an electromagnetic source under test, said device comprising a radiating element, a support for said radiating element, and a probe mount on which said support is fastened, and further comprising a screen carried by said support and interposed between said radiating element and said probe mount for reflecting the beams impinging upon it from said source under test so as to re-emit and scatter them as diverging beams into space.

2. A probe device as claimed in claim 1, wherein said screen is shaped and arranged around a central axis of symmetry also constituting a sighting axis for said radiating element when pointing the measuring device along determined measuring directions so that said screen is effective to then direct said diverging beams away <sup>from</sup> said central axis.

3. A probe device as claimed in claim 1, wherein said screen is so shaped that when said electromagnetic radiation source under test is disposed on a measurement site comprising an anechoic chamber enclosing said source and said device within walls made of a material absorbing the wave lengths associated with the electromagnetic radiations from said source and said device is used as a measuring probe device for determining the characteristics of said source under test, said diverging beams re-emitted by said screen are directed towards said absorbing walls.

4. A probe device as claimed in claim 1, as associated with a movable carrying device for supporting and moving it to scan a predetermined surface when it is used as a measuring probe device for  
5 determining the characteristics of said source under test and the latter is fixed.

5. A probe device as claimed in claim 4, wherein said predetermined surface is planar.

6. A probe device as claimed in claim 4,  
10 wherein said predetermined surface is cylindrical.

7. A probe device as claimed in claim 1, wherein said screen is shaped and arranged around a central axis of symmetry to be effective to direct said diverging beams away from said central axis, said  
15 radiating element is a conical horn, said support is a wave guide with a circular cross section arranged as an extension of said conical horn with same central axis of symmetry, and said mount is a rectangular plate transverse to said central axis.

8. A probe device as claimed in claim 7, wherein said screen is a conic skirt having a circular cross section around said axis, inclined by an acute angle with respect to said central axis towards said  
20 probe mount.

9. A probe device as claimed in claim 8, wherein said acute angle equals 45 degrees.

10. A probe device as claimed in claim 7, wherein said radiating element, said support, said  
25 probe mount, and said screen are made of a metallic  
30 material.

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5           12. A probe device as claimed in claim 7 or 8,  
wherein said radiating element, said support, said  
probe mount, and said screen are made of a metallic  
material.

13. A probe device as claimed in claim 7 or 8  
10 for use with an antenna emitting within the hyper  
frequency range as said electromagnetic source for  
measuring its radiation diagram.